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ABSTRACT

This document contains four papers presented at a symposium on the status of human resource development (HRD) research moderated by Barry Johansen at the 1996 conference of the Academy of Human Resource Development. "An Exploration of the Type of Research Appearing in the AHRD Conference Proceedings" (David E. Arnold) reviews and classifies the research appearing in the AHRD conference proceedings in 1994-1995. "Identifying Core Journals for HRD Research: Process and Results" (Catherine M. Sleezer, James H. Sleezer, R. Wayne Pace) discusses their identification of 258 journals that published 1,290 refereed human resource development (HRD) research-related articles in 1980-1994 and 18 journals that each published more 15 articles during the same period. Anders Vind's paper "HRD Research and Trade Union Cooperation" describes how research-based cooperation with trade unions in Denmark has proved to be a productive development within the field of HRD research. "Theoretical, Conceptual, and Methodological Issues Surrounding a Large Scale Change Effort: The Ford Motor Company/University of Georgia Manager as Instructor Research Project" (Karen E. Watkins et al.) traces the evolving role of managers as educational leaders for the learning organization and evaluates the effectiveness of the manager-as-instructor approach as implemented by the Ford Motor Company in Georgia. Papers contain references. (MN)

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# SYMPOSIUM
# [34] STATUS OF HRD RESEARCH

**Chair: Barry Johansen, Medtronic, Inc.**

**An Exploration of the Type of Research Appearing in the AHRD Conference Proceedings**
**David E. Arnold, University of Minnesota**

**Identifying Core Journals for HRD Research: Process and Results**
**Catherine M. Sleezer, Oklahoma State University**
**James H. Sleezer, Oklahoma State University**
**R. Wayne Pace, Southern Cross University**

**HRD Research and Trade Union Cooperation**
**Anders Vind, University of Roskilde, Denmark**

**Theoretical, Conceptual, and Methodological Issues Surrounding a Large Scale Change Effort: The Ford Motor Company/University of Georgia Manager as Instructor Research Project**
**Karen E. Watkins, Tom Valentine, Andrea Ellinger, and Maria Cseh, University of Georgia**
**Lewis J. Bellinger, Carol Barnas, and Don Blum, The Ford Design Institute, Ford Motor Company**

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**Academy of Human Resource Development**
**1996 Conference**
**Minneapolis, MN**
**February 29-March 3, 1996**

CE 073 515



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# An Exploration of the Type of Research Appearing in the AHRD Conference Proceedings.

*David E. Arnold*
*University of Minnesota*

*The Academy of Human Resource Development's mission is to advance the field of HRD through the systematic study of human resource development theories, processes and practices. This paper reviews and classifies the types of research that have appeared in the AHRD conference proceedings for 1994 and 1995.*

One theme that continually emerges from academicians within Human Resource Development is that the field is desperately in need of more theory building and research that is based upon sound scientific and methodological principles (Watkins, 1990). Argument is quite lively over whether that research should be based in the empiricist/positivist tradition or in the interpretivist/phenomelogical one (Marsick, 1990), but there appears to be some agreement that whatever paradigm is taken, it needs to be rigorously pursued (Passmore, 1990). This presents quite a dilemma for most within HRD as they struggle between practical relevancy and scientific relevancy. This, of course, is a problem with which almost all applied fields have to struggle.

Nonetheless, there appears to be a concerted effort within HRD to gain more credence as a discipline that can pass muster when it comes to scientific integrity. Perhaps some of the best expressions of this effort take the form of more research outlets for publishing that have the stated mission of advancing the scholarly nature of HRD. The creation of the Human Resource Development Quarterly, born out of the Research Committee of the American Society for Training and Development, was perhaps one of the first attempts at this ennobling goal. As Swanson (1990) put it, "Many of us see HRDQ as the start of a community of HRD scholars. I believe that this research quarterly will provide the intellectual footing and research credibility HRD requires to mature as a field of study and practice."

The Academy of Human Resource Development (AHRD) was also developed with the express purpose of advancing the field of HRD through "the systematic study of human resource development theories, processes and practices..." (Holton, 1995). Indeed, the requirements for the papers presented at the AHRD annual conference are: a) a problem statement and theoretical framework, b) research questions and/or hypotheses, c) an expressed methodology, and d) results and conclusions (Holton, 1995). Obviously, the goal of this conference is to promote sound research within the field of HRD. The purpose of this paper is to explore the types of research that is being conducted by those who have had papers accepted by the annual AHRD conference from 1994 to 1995. What will emerge is a snapshot over those two years that reflects the state of research within the field.

## Methodology

In order to explore the state of research within AHRD, the 1994 and 1995 AHRD conference proceedings papers were read and classified into the type of research on which they were based. The classification scheme was in part adapted from Pedhazur and Schmelkin (1991) and consisted of the following categories:

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I. *Library Research/Speculative* - General observations and/or speculation based upon other sources, personal observation and personal opinion. There are no researchable models *explicitly* offered and *no data analysis* (either qualitative or quantitative) is conducted. This would include exploratory papers in which one integrates, synthesizes and expands upon the work of others in an effort summarize or generate new ideas.

II. *Descriptive Case or Field Study* - An in-depth examination of a single entity or a group of entities as they occur naturally in the field (e.g., businesses, trainees, etc.). This research is descriptive and can be based upon quantitative analysis, qualitative analysis, or a combination of the two. This category includes descriptive surveys, case studies, ethnographic studies, etc. There is no experimental method present, i.e. there is no manipulation of treatments and there is no random assignment of subjects to different levels or categories of treatments (Pedhazur and Schmelkin, p.251).

III. *Field or Laboratory Experiment* - This category includes true experimentation in which there is manipulation of treatments and there is random assignment of subjects. It also includes quasi-experimental designs in which there is manipulation of treatment conditions but there is no random assignment of subjects (Pedhazur and Schmelkin, 1991). It is important to note that this definition of quasi-experiment has been selected arbitrarily, as there is no consensus concerning what exactly qualifies as a treatment (e.g., Cook and Campbell, 1979). Another requirement for this category is that measures be taken on some criterion variable and those measures be analyzed across treatments.

IV. *Theoretical Model or Instrument Construction*- A model or instrument is posited based upon previous research or original ideas *that is in principle testable*. This is not to be confused with a classification scheme in which no relationships are posited between categories or constructs. The model must consist minimally of operationally definable concepts or variables as well as the hypothesized causal relationships among those variables (Dubin, 1978). Instruments must consist of operationally defined constructs that permit measurement.

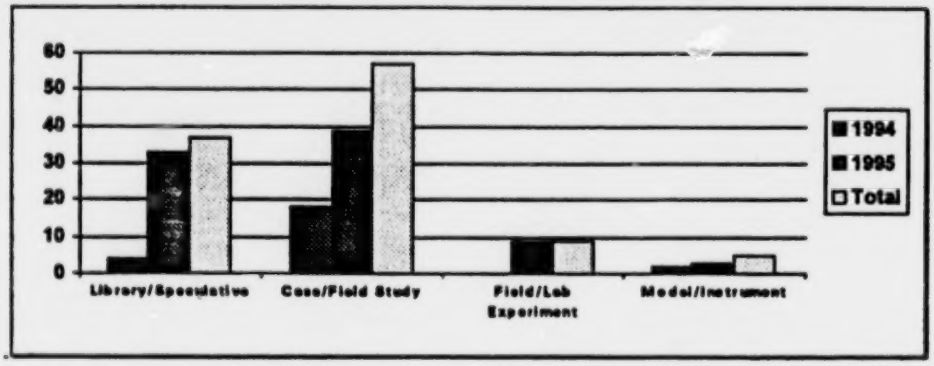
All articles were read by two graduate students in HRD and placed into the appropriate categories. Any discrepancies between classifications were discussed until consensus was reached. The classification was very conservative. If an article was 90% library research but included some field data, then that article was classified in the "Field Study" category. In general, all articles were classified into a particular category if there was any content at all (no matter how small) to support that classification. There was no discrimination as to whether the data presented was qualitative or quantitative. So, for example, a "Field Study" was classified as such regardless of whether the data reported were qualitative or quantitative. All that mattered is that the researcher went out into the field and systematically collected data.

A decision was made to exclude from this study certain articles that belonged to non-research oriented symposia, symposia for which papers were not printed in the proceedings, and articles that described work in progress. For the 1994 proceedings, this included the article by DeJong and Versloot. For 1995, these included articles in "HRD in China" (symposia 6), "Research Centers: Ecstasies and Agonies" (symposia 19), "Advancing the Profession Through Journals: The Editor-Author-Profession Partnership" (symposia 21), and "Issues in Case Study Research in HRD" (symposia 25). Additionally, article 5-3, "Leadership Development of Physician Executives" and article 24-4, "Validating a Check Sheet as a Guide for High-Involvement Training," were excluded because the articles outlined research that was in progress.

**Results**

A total of 108 articles were classified, 24 from 1994 and 84 from 1995. The breakdown of articles into research type is shown below (Fig. 1)

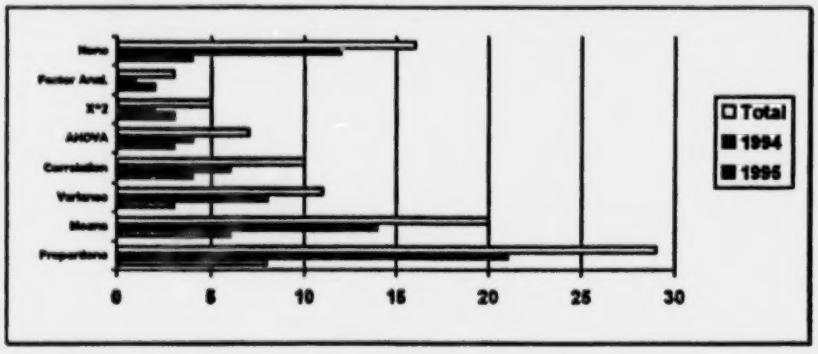
**Figure 1. Classification of Articles for 1994 and 1995**




The most frequent article types in both years was "Descriptive Case or Field Study" (18 articles [75%] for 1994; 39 articles [46.4%] for 1995), followed by "Library Research/Speculative" (4 articles [16.7%] for 1994; 33 articles [39.3%] for 1995), "Field or Laboratory Experiment" (0 in 1994; 8 articles [9.5%] for 1995) and "Theoretical Model or Instrument Construction" (2 articles [8.3%] for 1994; 3 articles [3.6%] for 1995).

An attempt was made to probe further into the type of tools used in this research, both quantitative and qualitative. All experimental studies were necessarily quantitative since the requirements were that statistical techniques be used to measure differences between control and experimental groups given some experimenter controlled treatment condition. The case or field studies, however, could have been based on either qualitative or quantitative methods. In order to explore further the type of research techniques used, an analysis was conducted to classify the quantitative and qualitative methods that were employed in these case and field studies. The results are presented below (Fig. 2).

**Figure 2. Breakdown of Quantitative Methods**




Looking at both years, quantitative methods were employed in 71.9% (41 out of 57) of all case or field studies examined. Of the 41 that used a quantitative methodology to describe data, the overwhelming majority relied on rather simple measures such as proportions, means and variance (e.g. standard deviation). Only 5 articles used correlation or regression analysis, and only 3 used ANOVA (analysis of variance).

Sixteen articles within the descriptive case or field studies classification used no quantitative methodology and relied on qualitative approaches. These articles were further scanned to determine what qualitative research methods were employed in the compilation of the data reported. No research method

was specified in four of the articles. Within the remaining 12 articles, 10 different research methods were reported. Below is a listing of those cited methodologies.

- Action Research
- Analytic Paradigm
- Naturalistic Inquiry
- Focus Group Discussion Format
- Ethnographic Perspective
- Action Science
- Exploratory Qualitative Study
- Qualitative Descriptive Case Study Method
- Organizational Anthropology
- Organizational Stories Analysis

## Discussion of Results

There is a continuing debate within HRD as to what the appropriate avenue of research is, given the inherently complex and chaotic nature of the entities under study, e.g. organizations, human beings, systems, etc. Unfortunately, this debate frequently deteriorates into opposing camps which are based on false dichotomies. These dichotomies traditionally revolve around qualitative versus quantitative approaches and interpretive versus positivist approaches.

At the present, most researchers agree that there is utility in all of these approaches. Depending on the questions one asks, and depending on the nature of the observation and measurement available, the research methods employed will vary across circumstances. It is not that one approach is better than another in all cases, but one approach may be better suited for a particular problem than the other.

As a community of scholars, however, there ought to be consensus surrounding at least a few issues. First, that knowledge is built through the *systematic* observation and interpretation of data in our world. Second, that theories concerning cause and effect relationships between variables should be tested for validity. Last, the results of these activities should be disseminated expediently through the community of scholarship and practice. All of these statements are value neutral with respect to the qualitative/quantitative and positivist/interpretive debate. Lest one think that these issues appear slanted towards positivism, remember that interpretivist methods demand just as much rigor in their collection and interpretation as positivist ones.

Almost 43% of the articles examined within the AHRD conference proceedings for both years were based on library research alone or were speculative in nature. Certainly, such work has its place and is useful for many reasons. But is this proportion appropriate for a forum whose mission is to further knowledge and research within HRD? The HRD community of scholars should take it upon itself not only to continue to think and create ideas concerning the development of the human resource, but also take just as seriously the systematic observation and interpretation of data that new knowledge is built upon. If HRD is to be taken seriously by either industry or academia, then it must fulfill the obligation to increase the foundation of knowledge in a rigorous and credible manner.

## Conclusion

The mission of the Academy of Human Resource Development is to advance the field of HRD through "the systematic study of human resource development theories, processes and practices..." AHRD has served an integral role in moving HRD from a field of fads to a field of theory and informed practice. The Academy must continue this noble goal as a community of scholars. Only as a community will this mission succeed.

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# Identifying Core Journals for HRD Research: Process and Results*

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*This research identified the core professional journals that published HRD research during the fifteen-year period from 1980 through 1994. Using the research methodology of citation analysis and specific delimiters resulted in identifying 258 journals that have published 1,290 refereed HRD research-related articles. It also resulted in a list of 18 journals that have published more than 15 articles in the time period.*

During its short history, the human resource development (HRD) field has grown dramatically to address the learning and performance needs of individuals, work groups, and organizations. One strategy for quickly advancing a young field, particularly an interdisciplinary field such as HRD, is to draw heavily on knowledge and work from other fields. Jacobs (1990) noted that HRD has relied on five major bodies of knowledge: education, psychology, systems theory, economics, and organizational behavior. A mature field, however, has a recognized body of scientific work and literature that guides practice and provides a basis for further developing theory and research. As Dorelan (1988) pointed out scientific work provides a foundation for a discipline and its specialties.

Many writers have noted the development of HRD as a field. For example, Gilley (1989) stated that during the past two decades, HRD has emerged as a professional field in its own right. Watkins and Willis (1991) defined HRD as a field of study and practice and stated that "it seems to be time for the field to move on to more theory development and the development of a distinct body of knowledge" (p. 92). Jacobs (1990) pointed out that, "HRD constitutes a unique body of knowledge and research derived from more fundamental disciplines" (p. 66). However, he also reported that little has been written about this unique body of research.

As Fox (cited in Dorelan, 1988) pointed out, publication is central to productivity in research such that work becomes *a work* only when it is published. Further, as Dorelan noted, "a substantial portion of scientific work is published in professional journals, the set of which can be viewed as a central institution of science" (p. 79). Identifying the professional journals that publish HRD research is the purpose of this study. As with all studies, the research methodology influenced the results.

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## Research Methodology

Citation analysis provides a systematic way to examine a specific subject area. For example, Lowenthal (1990) used citation analysis to examine human performance technology, and Alavi and Carlson (1992) used it to examine management information.

Similar to other types of disciplined inquiry, a citation analysis must be delimited with clearly specified assumptions and limitations. The delimiters for this study were the citation sources, the search terms, the types of publication, the year of publication, and the definition of HRD. The decisions relative to each delimiter established boundaries for the study and, therefore, are detailed in the following paragraphs.

The first delimiter of the study was the citation sources. The sources used in citation analyses vary. The research can involve scrutinizing citations from one journal (e.g., Garfield, 1992) or it can focus on citations from a selection of journals (e.g., Hamilton & Ives, 1992). Because the purpose of this study was to examine the diverse field of HRD research literature, the investigators decided that the sources for citations should extend beyond a single journal and even beyond a small selection of journals. The availability of electronic databases that identify and abstract citations provided a means for efficiently extending the analysis. The authors decided that Educational Resources Information Center (ERIC), Abstracted Business Inform (ABI/Inform), and PsycLit, three electronically available data bases, would include many articles related to human resource development research, and at a minimum, would cover all of the fields identified by Jacobs (1990).

The second delimiter of the study was the search terms used to select citations from the databases. The choice of terms reflected key elements of HRD definitions. McLagan (1989) defined HRD as the "integrated use of training and development, organization development, and career development to improve individual, group, and organization effectiveness" (p. 7). Swanson (1994) defined HRD as a process of developing and/or unleashing human expertise through organization development and personnel training and development for the purpose of improving performance. Watkins (1989) defined HRD as "the field of study and practice responsible for the fostering of a long-term, work-related learning capacity at the individual, group, and organizational levels. As such it includes—but is not limited to—training, career development, and organization development" (p. 427). Nadler and Nadler (1989) defined HRD as "organized learning experiences in a given period of time to bring about the possibility of performance change and/or personal growth" (p. 4). Based on these definitions, the search terms for HRD included human resource development, human resource, training, management development, organization development, and career development. Because the study focused on HRD research, each search term was combined with the word *research*. Using these combinations of search terms to select citations from the three databases resulted in the identification of over 12,000 citations.

The third delimiter of the study was the type of publication. The electronic databases include various types of written material such as articles published in refereed journals, non-refereed journals, and magazines. They also include papers presented at conferences as well as some public agency reports. The researchers limited the selection of articles to those published in refereed journals. Citations from refereed journals were used because such articles cite other works and, further, have been peer reviewed. Peer review is a measure of manuscript quality that is frequently used in academia. To separate the citations for refereed publications from the other types of references, the investigators relied on four reference books: *International Periodicals Directory*, section titled "refereed serials" (Ulrich, 1993), *Directory of Publishing Opportunities in Education* (Cabell, 1992), *Directory of Publishing Opportunities in Business and Economics* (Cabell, 1990), and *Directory of Publishing Opportunities for Management and Marketing* (Cabell, 1994). For purposes of this study, citations from journals not identified in one of these references as refereed were eliminated from consideration.

The fourth delimiter of the study was the year of publication. Only articles published during the fifteen-year period from 1980 through 1994 were included in the study.

The fifth delimiter of the study was the HRD definition used to screen the citation abstracts. While the definitions identified earlier in this paper contribute to understanding the field, they vary in focus, purpose, and outcomes. Further, none operationalized the concept of HRD at a level appropriate for this citation analysis. For example, each would be a poor filter for determining whether research on team behavior conducted with graduate students in a university classroom should be included in the study. Therefore, for this study, HRD was defined as

> the study and practice of human interactions in organizations including interactions with processes, tools, systems, other humans or even the self. Human resource development encompasses knowledge, skill, and value bases. The goal of HRD is to understand the interactions, processes, and systems and to ultimately support and improve individual, process, and organizational learning and performance.

Operationally, this definition bounds HRD in the following ways: (a) its focus is on understanding, unleashing, or facilitating the use of human expertise within organizations, (b) it occurs within one or more business, industry, military, or public-sector organizations, but does not include educational institutions, (c) it focuses on individuals who are already connected with an organization, (d) it focuses on adults and their learning and work, (e) it is limited to the preparation of HRD professionals and characteristics of interactions, systems, processes, programs, instruments, and their components or results. Using this definition of HRD, the research on team leader behavior would not be included in this study because it did not meet the criteria of focusing on individuals who are already in the organization.

***Assumptions.*** The study's first assumption, which is inherent in using citation analysis, is that the formal properties of a discipline's literature provide evidence of the structural features of the discipline itself. The study's second assumption is that the refereed articles included in the study are, on the whole, more useful for defining the unique area of HRD research than either non-refereed articles, *works* not included in the database, or *works* not selected for the study. A third assumption of this study is that the journals that published the greatest number of articles related to HRD research are core to the field.

***Limitations of the Study.*** A challenge in conducting this type of study was to set the appropriate boundaries such that only core HRD research citations were identified and that all them were included. Each delimiter served as a limitation for this study. For example, selecting different key words or using a different definition could have produced a different set of citations and abstracts for review and, ultimately, could have resulted in the selection of a different list of core journals. By using multiple search terms which included various components of HRD (i.e, *management development* and *career development*) rather than simply *human resource development* the investigators hoped to identify a broader selection of citations. However, it is highly unlikely that *all* HRD research citations were identified.

Several other problems are inherent in this type of research. Each database has its own format for storing and presenting citations. This can lead to difficulty in comparing citations appearing in more than one electronic database. Changes in a database's format over time can affect the selection process. Although most articles from a publication are cited and abstracted, the electronic databases are not comprehensive; that means some articles from some publications may not be included. Also, there may be errors in citations themselves (White, 1985). Abstracts are written by a variety of people. Some are prepared by editors or by professional abstractors and thus represent the abstractor's interpretation of the article. Others are written by the author of the article and supposedly represent the author's intention. Editing abstracts for length or style can also affect their content and how they are interpreted. Further, database citations and abstracts do not use consistent abbreviations, terminology, or formats. Abbreviations for journal names often varied among the databases and sometimes varied within a single database and required frequent interpretation by the investigators. Therefore, in this study, as in other types of research the biases and characteristics of the investigators serve as limitations. Krummel (1988) noted that such research reflects the compilers' insights and aspirations, and their conceptions of what scholarship is needed at that time.

**Results of the Study**

The study resulted in identifying 258 journals that published 1,290 refereed HRD research-related articles from 1980 through 1994. Table 1 lists the journals that published at least 15 of these articles and shows the number of HRD research-related articles published by each journal in the last five years and in the last 15 years. Comparing the last two columns of the table shows that the ranking of journals based on the number of HRD research-related articles has changed over time. Also, during the last five years, two journals that have been in existence for less than 15 years, *Human Resource Development Quarterly* and *Performance Improvement Quarterly* have emerged as the top and the third ranked leaders respectively based on the number of published HRD research-related articles. Personnel Management was ranked as second for this time period.

A synthesis of citations also showed refereed HRD research-related articles from 1980-1994 across journals (See Table 2). The results highlight that while many journals publish HRD-related research, fewer core journals exist.

**Table 1. Journals That Published 15 or More HRD Research Articles from 1980-1994**

| *Journal* | *Number of HRD Research-Related Articles Published from 1990-1994* | *Number of HRD Research-Related Articles Published 1980-1994* |
|---|---|---|
| Human Resource Development Quarterly | 23 | 23 |
| Public Personnel Management | 15 | 45 |
| Performance Improvement Quarterly | 14 | 16 |
| Journal of Organizational Behavior | 12 | 12 |
| Personnel Psychology | 12 | 74 |
| Journal of Applied Psychology | 10 | 15 |
| Journal of Management | 10 | 31 |
| Management Education and Development | 10 | 19 |
| Public Administration Quarterly | 10 | 16 |
| Academy of Management Journal | 9 | 44 |
| Management Decision | 9 | 19 |
| European Journal of Operational Research | 8 | 24 |
| Organization Development Journal | 8 | 22 |
| Human Relations | 7 | 38 |
| Academy of Management Review | 6 | 54 |
| R and D Management | 5 | 19 |
| Group and Organization Studies | 3 | 43 |
| Journal of Applied Behavioral Science | 2 | 24 |

**Table 2. Number of Refereed HRD Research Articles from 1980-1994 Across Journals**

| *Number of Articles Published* | *Number of Journals* |
|---|---|
| at least 15 articles | 18 |
| between 10 and 14 articles | 10 |
| between 5 and 9 articles | 40 |
| between 2 and 4 articles | 81 |
| one article | 109 |

**Summary**

This study provided a snapshot of HRD *work* and resulted in a list of core refereed journals that publish HRD research-related articles. The results have implications for HRD researchers who seek journals for their work and for HRD practitioners who want to efficiently access research-related work.

The study also has implications for further research. This study is a small step in developing a distinct body of knowledge for HRD. Additional steps could include (a) examining the boundaries of the field, (b) categorizing periodicals, and (c) synthesizing HRD research.

This study provides a concrete example that other scholars can use to discuss the boundaries of HRD and to reach consensus on the delimiters. For example, if an expected journal was not included in Table 1 or if an unexpected journal was listed, then the study's delimiters should be examined.

This study also provides a basis for categorizing periodicals. Bradford's Law of Scattering focuses on the extent to which articles on a given subject appear in periodicals devoted to other subjects. According to White (1985), Bradford concluded that in a given subject area, periodicals can be categorized in three separate groups: those producing more than four references a year, those producing between two and four references a year, and those producing one or fewer references a year. The journals identified in this study could be categorized in this way by combining the beginning publication dates for journals and the number of articles published per year.

The articles identified in this study document *HRD work* from a variety of perspectives including psychology, management, education, communication, human relations, operations, and public administration. Each perspective adds unique outlooks, jargon, and models. Synthesizing these perspectives into a body of HRD knowledge can contribute greatly to HRD practice and research.

Because HRD is an interdisciplinary field representing different perspectives, discussion among HRD scholars is critical to taking the next steps in developing the body of HRD knowledge. The steps are challenging especially because they require reflection on basic assumptions—however, as Watkins and Willis (1991) pointed out, the time for such effort seems right.

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# HRD Research and Trade Union Cooperation

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***The typical cooperative, Scandinavian setting of the workplace, puts HRD research in a specific context. This paper discusses how research-based cooperation with trade unions can be a productive development within the HRD-research.***

This paper will try to contribute to the discussion of research politics in the area of HRD research by presenting some Danish examples where trade unions cooperate with research centres. It will primarily build on the experiences from the Adult Education Research Group at the University of Roskilde. The paper will also give a brief introduction to the general situation of HRD and trade unionism in the Danish context.

## Trade Union Politics and HRD

There is a well-known and long lasting history of cooperation on the Danish labour market between employers and trade-unions. It s main focus and central aspect have been and is still the collective bargaining about wages and working conditions. Based on this central task there has also been a long tradition of cooperation in other workplace/workforce-oriented questions. There was for instance a general development of productivity developing wage-arrangements in the sixties and in the eighties there has been cooperation in the process of implementing new technologies. This was based in formal agreements on a national basis as well as formal arrangement on company level. This kind of cooperation between the partners on the labour market was supported by the state. In the area of work-related education - vocational training, postgraduate courses, etc. - there has been a tree-part system, where the education is public founded and regulated by the state, but based in a large system of advisory boards with equal representation of employers and employees.

During the last 10 years this kind of cooperation has been challenged by a number of changes in the workplaces:

- There has been a growing need for individual agreements at local, company level. Both within traditional bargaining questions - wages, working hours, etc. - but also for development of local plans for the education and ... of the workforce. And these plans will not always be developed along the lines at the national union/employer agreements.
- This has to du with the general development in industry - with still more emphasis on innovation, flexibility, etc. , it becomes still more difficult to for instance make plans at national level for the training programs in specific sectors. Both the individual industries as well as the individual employee has raised the demand for specific solutions.
- Trade Unions in Denmark has a long tradition for "handling individualities" in terms of for instance having agreements with wages based both on a collective part and an individual part, negotiated at the local level - both now the members are met with new perspectives in there working life: they have to continuously develop their skills and knowledge, and that is much more vital also in an economic sense than just the bargaining process in the Union. And sometimes it seems like the company (and management) is better to understand and handle this than the Union.

These challenges have been meet by new strategies from the trade union movement. During the last part of the eighties the Scandinavian labour movement developed the strategy for "The developing work" ("Det udviklende arbejde") - claiming that new production system, information technology, etc. have created new possibilities for both companies and employees - that it would be in the interest of both the

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company/management and the employees to make work more challenging, more competent and make the developing of skills and knowledge be a part of the work. This union-based strategy could be seen very much as complimentary to management concepts like "the learning Organisation".

This strategical development within the unions has of course also changed (to some degree) the daily work of the union and the shop stewards. The traditional bargaining and legal questions are still a large part of union work - but the development of support for career planning, educational planning, technology problems, at the members individual workplace has increased the last 10 years. And this has of cause as one of its implications meant a growing interest in HRD and in HRD research.

**Trade Unions Interest In Hrd Research**

During this development there has been a growing interest from trade union in specific areas of HRD research:

The most outspoken interest has been in the area of linking training and education to the workplace - especially in developing tools for planning of education within industry. Trade Unions very often plays a very active roll in this matter in the companies, and has felt the need for evaluation of the existing procedures when training and educations are discussed in the workplace as well as development of new tools

Another kind of research request is within curriculum development in work related training and education. This is very often formulated by the advisory bodies together with employers and the state - but both within general qualifications as well in different trades and professional fields there have been a number of projects dealing with curriculum development - and the trade unions play an active part in formulating this projects

This curriculum oriented research is also connected to a broader interest in analyses of the changes in demands for qualifications - now and in the future. A number of trade unions have been involved in qualifications analyses.

This has been the picture the last ten to fifteen years - and it is still the most common kind of project. But there is an ongoing shift towards a broader work with other HRD tools than training and education. In the last couple of years there has been an increasing interest for career planning, personal development, and that kind of "soft" and individually oriented tools. As an example of this it's worth noticing that the trade union council of Denmark over the last two years have made three new sets of materials for shop stewards and workplace trade union work - within "employee politics", "personal development" and latest "management".

**HRD Research And Trade Union Involvement**

This interest from Unions in HRD is also reflected in some of the work done by the Adult Education Research Group at Roskilde University. The Group has approx. 20 members of the academic staff and conducts research and education within adult education, evaluation, HRD, etc. The Group is also responsible for educational programs in the normal University structure - especially the graduate course on adult education.

In research the group has been involved in a number of projects with trade union involvement. This projects are formulated along the interest mentioned above. The largest project has been founded by the Ministry of Labour but with very much interest from Trade Unions. It was a project about General Qualifications especially in relation to short term courses related to the labour market (Andersen et. al. 1994).

Besides this the Group has been involved in the evaluation and development of the internal educations within the trade unions. Due to the great number of tasks within the trade unions and their involvement in a number of areas in society and industry there is an extensive education within the trade unions - with own schools for adults etc.

And finally there have been a number of projects dealing with the integration of HRD tools - especially planning and utilisation of the extensive public training system for workers. Companies can send

employees to courses (one - two weeks) - free and with compensation for a great part of the salary payed to the worker.

The basic scientific problem in this kind of projects has been similar to other research "on demand". There is a pressure on getting to practical, "implement-ready" and useful results - and less emphasises on the scientific aspect of the research. That is a struggle that is also a part of this kind of projects.

An often asked question is off cause whether this becomes political work with predetermined results. Again, the problem is more generally related to the setup of research on request/from external customers. It can be politically difficult because in this case the Unions have opinions they don't like being questioned - but in the matters we discuss here there are not that many assumptions in advance and generally the unions are open-minded in this area. But there are some good discussions going on - but none of them has lead to restrictions on the scientific side.

So there are no - or very small - disadvantages in this kind of cooperation, and there are several advantages: First of all does this kind of cooperation in a Danish context foster a very good relation with the employees and the ability to get into the workplace. It very often means that there is basic trust between researcher and "the people on the floor". Secondly it brings the real world - as it s developing out there - into research. And the political discussion, the general concept of cooperation among all partners on the labour market is part of reality out there - and also for HRD in the companies. Therefor it has to be part of HRD research as well.

**Conclusions**

The examples given here have been very closely linked to the Danish situation. But what can be a general point is, that a very explicit research based on the Human side of HRD, the actual individual - not just an abstract "employee" or "member of the workforce" - can be of interest, and can be productive. The field of HRD deals with social techniques and they are not by nature neutral. We are all part of the process of modernisation and especially in these years there is an enormous interest in thehuman factor.

But if we don't constantly question and discuss the actual lines of development then we neglect our responsibilities as professionals in HRD. We have to discuss what the implications and the result of the techniques that we are part of will lead to. Is this for all human beings a happy development - is this processes that will give us a more democratic society? Questions that don't have easy answers - and by my opinion not even traditional political answers - but which has to be discussed. Discussed within our professional groupings and with the people we do research on.

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# Theoretical, Conceptual, and Methodological Issues Surrounding a Large Scale Change Effort: The Ford Motor Company/University of Georgia Manager as Instructor Research Project

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*This paper traces the evolving role of managers as educational leaders for the learning organization. The manager as instructor approach implemented at Ford is described. Organizational change researchers face a number of design issues in measuring large scale change projects such as this across many different hierarchical levels and settings. This research project utilized a two level survey design, qualitative interviews, and a developmental change model.*

The Ford Design Institute's mission at Ford Motor Company is to change the fundamental way in which vehicles are designed and manufactured within Ford. Education and training is being used as the pivotal process to bring about this change. One key element of this educational process is using technical managers as instructors in a top-down cascading training environment. Since this type of training delivery is a relatively new process within Ford, it was critical that it's effectiveness relative to promoting organizational change be documented.

The purpose of this research was to empirically document the effectiveness of this process as a change strategy and to delimit the boundaries of the approach. Watkins and Bellinger (1996) details the research partnership. This paper describes the theoretical framework undergirding the research, the research methodology, and preliminary findings. The theoretical framework incorporates the Concerns-Based Adoption Model (Hall & Hord, 1984) which suggests that there are predictable stages of concern and levels of use associated with the implementation of new innovations and that innovations are adapted by users into multiple configurations, some of which may be ineffective in producing the desired behavior change.

## Theoretical Framework

In this study, we drew on the work of Hall and Hord (1984) whose Concerns-Based Adoption Model empirically guides the innovation definition and implementation process and on the transfer of training research (Baldwin and Ford, 1988). The Concerns-Based Adoption Model is a conceptual framework and an approach to measuring and documenting the progress of innovation adoption and implementation. In the Ford project, the innovation of concern was the use of managers as instructors. From the perspective of participants, the new approach to engineering being taught by managers in the Robustness Imperative course was also an innovation.

*The Innovation Configuration.* Innovations are almost always adapted by implementers to fit the organization's circumstances--what has already been done, what is possible given organizational history, resources, and motivation, and what best addresses organizational concerns (Berman and McLaughlin, 1974). Researchers Hall and colleagues determined that, because of this typical approach to change, it would be important to determine what exactly is implemented. Therefore, we could also determine whether some configurations are more effective than others. An innovation configuration is a list of essential components of an innovation along with

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acceptable and unacceptable variations (Hall and Loucks, 1978). Configurations are determined through a process of asking innovation developers and facilitators a series of questions:

--What would you observe when the innovation is operational? What would be different when the organization is using the innovation?

--What are individuals in the organization doing?

--What are the critical components of the innovation?

Following these interviews, the configuration is further defined by interviewing and observing users of the innovation to identify additional components and to get feedback on acceptable and unacceptable variations. In this study, the innovation was the manager as instructor approach. We examined Ford documents describing the intended implementation process and then developed an innovation configuration checklist as part of the survey of participants in the training program.

*Stages of Concern.* A second dimension of the Concerns-Based Adoption Model used in this project was the stages of concern. Stages of concern are predictable, developmentally evolving feelings and concerns about use of an innovation which can be used to identify the stage of the change process. Prior to adoption of an innovation, individuals report concerns about themselves--whether or not there is a fit between their interests, skills and role with the innovation, whether or not using the innovation might make them lose face, etc. Once they have begun to use the innovation, they are more likely to report task concerns such as concerns about the amount of time the change is taking away from other responsibilities or about the awkwardness of doing something new. Only well-established innovations reach the third stage of impact concerns. In this stage, individuals are concerned about measuring the impact of their activities to determine whether or not the new approach is more effective. From our conversations with the innovation designers and with instructors, it was clear that this was a significant area to explore. Stage of concern theory suggests that innovations fail if self and task concerns are not addressed in the early stages of implementation.

*Transfer of Training--Extent of Use.* A major criticism within the training literature is that organizations' investments in training and development are often not fulfilled because transfer of training is not maximized (Baldwin and Ford, 1988; Analoui, 1993). While research initiatives have examined the constructs associated with transfer, for example, supervisor supportiveness of training, a supportive organizational culture, most research focuses on improvements in the training experience -- not necessarily on how training is actually conducted, or alternative approaches. The workplace needs to be recognized as a place where people can and do learn (Billett, 1992). Often the training environments in which people 'learn' are quite different from the physical and social environments in which the learning is applied. Within the workplace, for example, its would be expected that employees would have access to peer experts as well as to feedback from peers and managers. The quality of relationships of peers and managers, teachers and students, experts and novices, and supervisor and subordinates will depend upon the nature of the setting and the quality of the culture (Billett, 1992). While relationships and culture are moderating variables within organizations, managers assuming expanded roles as trainers, instructors and educators may impact organizational learning and transfer.

Today, it is estimated that employers invest $210 billion in workplace training (Carnevale, 1990). Despite the investments in training, "not more than 10% of these expenditures actually result in transfer to the job" (Georgenson, 1982, Baldwin and Ford, 1988). The manager as trainer, instructor and educator approach is a promising training intervention to increase transfer of training, as well as to facilitate learning at multiple levels within organizations. Research on transfer and the impact of training has found that individuals are less likely to use the skills learned in training if these skills are not reinforced and supported back at work. Huczynski and Lewis (1980) found that transfer was enhanced when learners had pre and post training support from their bosses and when bosses sponsored the educational intervention. Most transfer studies test learning and retention of knowledge and skills . Baldwin and Ford (1988) identified seven studies which looked at the work environment and transfer. In these, measures of generalization and maintenance of the change included attempts to transfer knowledge to work practices and measures of perceived on the job changes. Similarly, innovation researchers identify levels of use of an innovation from learning more about it or preparation for use, to early skill practice, to more refined use (Hall and Hord, 1984). This study hypothesized that individuals would not yet be likely to actually use the new robustness design principles, but early stage use, particularly reading more about the practice or talking to others about its significance to their current design approach, might be more evident

among those who experienced the innovation as intended. Therefore, we operationalized transfer as the extent of early use behavior among participants of the principles taught in the first course as part of the implementation of the manager as instructor approach.

*Managers as Instructors and Role Fit.* Initially, the Ford Design Institute was introduced to a process called LUTI that was implemented at Xerox. This approach called for managers to serve as instructors following a sequence in which they would Learn the subject themselves, Use the skills in their work, Teach it to others, and Inspect others' use of the new skills. Grounded in solid learning theory, the approach was accepted at Ford. It was also adapted. Managers did not Use the innovation before teaching it nor were they expected to Inspect the use of the skills once they had taught them. This study could not explore the possible comparative effectiveness of the original model vs the FDI approach, but it is likely that the elimination of these two steps influenced the results. Research on using managers as instructors is limited and largely descriptive (Ellinger and Watkins, 1996). This study focused on managers' concerns about the innovation and their belief that serving as an instructor did or did not fit among their roles and responsibilities.

## Conceptual Framework for this Study

Figures 1 and 2 below depict the conceptual framework undergirding this study. Implementation researchers Goodman and Steckler (1989) note that trial use is the product of a series of critical factors, particularly a decision about whether or not the costs of using the innovation are offset by its benefits. Our framework suggests that a critical component of that cost-benefit analysis is the extent to which the change is congruent with user's beliefs about what should occur.

**Figure 1. Organizational Impacts Of Using Managers As Instructors--Participants' Perceptions**

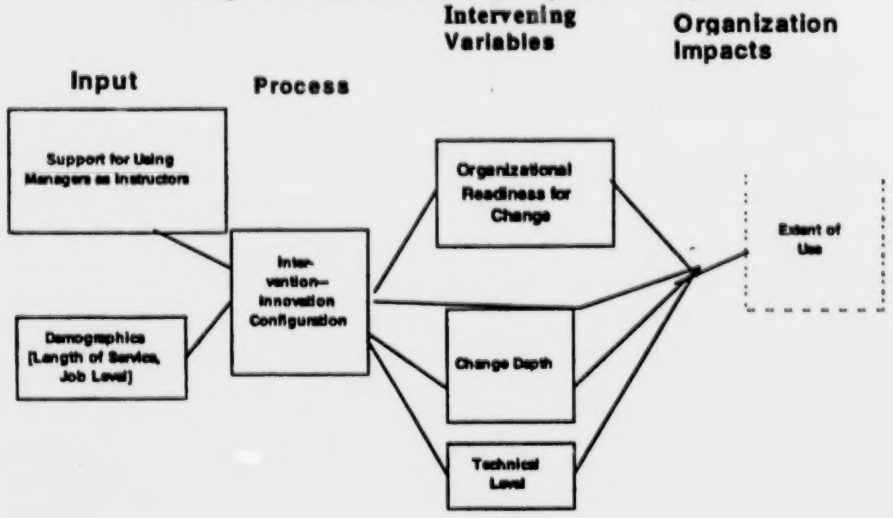


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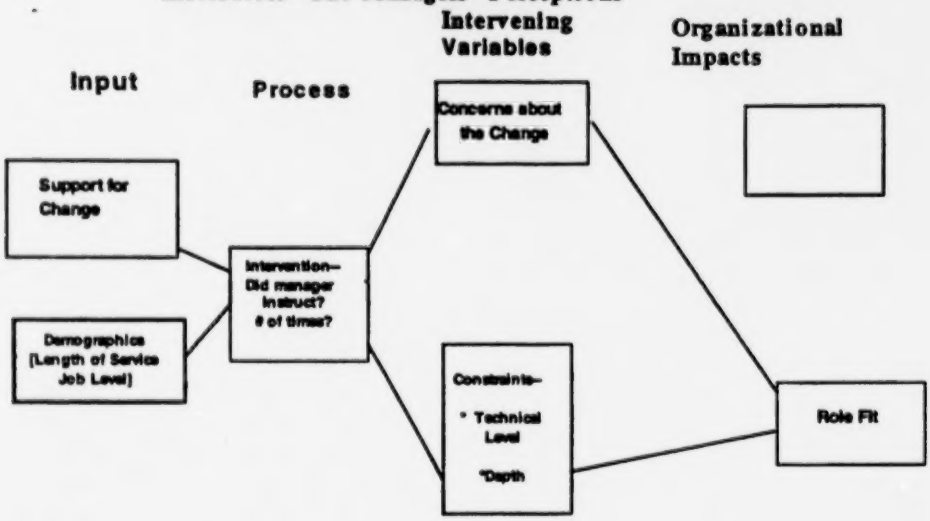
**Figure 2. Organizational Impacts of Using Managers as Instructors--The Managers' Perceptions**




**Research Objectives**

- To identify some of the ways the manager as instructor approach is and is not perceived as effective as a component of FDI's overall organizational change effort
- To identify ways of strengthening the manager as instructor process

**Limitations of the Study**

1. This study did not measure the manager as instructor approach against other educational or training delivery methods. Although such a comparison would be useful to help argue for or against this approach, human and organizational processes are so infinitely variable that there was little likelihood that a fair or comparable comparison could be made. This study enabled us to learn more about the conditions under which the manager as instructor approach is likely to deliver greater impact.

2. This study emphasized the FDI manager as instructor approach as an educational innovation and therefore did not measure knowledge gained through the approach. Since FDI had already conducted such a study and found the results more than satisfactory, this study was limited to determining the extent to which participants reported early use of the innovation. Based in the literature of organizational change, the results of this study speak more to the use of the manager as instructor approach as an educational innovation. The extent of use measure is a transfer of training measure which may be used to document transfer over time.

3. This study did not document the long term benefits of using the manager as instructor approach. This study is a slice in the long term evolution of an innovation. As such, it took a pulse and established a benchmark against which FDI can later test to determine whether or not changes have continued to occur. Because innovations such as the use of managers as instructors or the use of robustness in engineering practices are skills which evolve with use, it was anticipated that individuals would respond differently to these questions over time. Therefore, we scaled key constructs developmentally to depict where the organization is at this time in the life of the implementation of the FDI manager as instructor approach. The extent

of use scale moves from thinking about doing, reading or gathering information to inform use, to using the concepts of robustness. Similarly, managers' concerns about serving as instructors range from early use concerns [personal concerns about role fit, lack of information, or concerns about having the time to implement the change] to concerns about their impact as instructors on their employees.

## Assumptions of the Study

1. Change is a process, not an event (Hall and Hord, 1984).
2. Change involves predictable, measurable, developmental changes in concerns and ability.
3. Individuals' perceptions are one measure of the outcomes of this change.
4. More than one configuration of the innovation can lead to effective outcomes.
5. When the long term objective is a change of the paradigm underlying engineering and manufacturing practices, managers need to be extensively involved in learning, teaching, and inspecting the implementation of this change.

## Methodology

Quantitative and qualitative methodologies were employed to study this change process. Qualitative research activities included semi-structured interviewing with a random sample of managers and participants (Ellinger and Watkins, 1996). The findings from this research effort were incorporated into the survey design. Collaborative survey development was undertaken to create two different survey instruments for distribution to the population of managers serving in instructional capacities and the population of participants exposed to this cascaded change process. The survey design differentiated between users of the innovation and those affected by it. The two surveys enabled researchers to explore different dimensions of the innovation. From both groups, we determined under what conditions each group supported use of the managers as instructor approach. From participants, we determined the configuration of the innovation that had actually been implemented, and the extent to which they were already using the change which had been presented by their managers through this approach. From managers, we determined their stage of concern about serving as instructors and the extent to which they felt that this role was consistent with their sense of their emerging roles and responsibilities.

Manager surveys were distributed to a random sample of 351 managers and participant surveys were mailed to 1249 participants. Actual response rates were 233 managers [66.4%] with 205 usable surveys, and 715 participants [57.2%] with 665 usable surveys. Mean years at Ford among managers was 24.3 years, among participants 13.6 years. Instructors had taught an average of 2 courses using this method and participants had attended a mean of 1.5 courses taught by their managers. Eighty-five per cent of managers were at job levels 3 and 4 and 93.7% of participants were at job levels 1 and 2. For most computations, the sample was treated in the aggregate of all manager/instructors or all participants. Samples were further subdivided by innovation configuration and stages of concern for correlational analyses. Scales were tested for reliability. Reliability scores for each of the scales were strong, ranging from .94 to .65.

The design which emerged from this collaborative research project blends organizational change measures and program outcome measures. Through correlational analysis, frequency distributions, and t-tests; patterns of response were detected.

## Results

Table 1 below depicts the conceptual dimensions measured in this study including scale reliability information and scale means.

**Table 1. Conceptual Dimensions Measured**

| Dimensions | Scale Alphas | Managers | Participants |
|---|---|---|---|
| Perception of Role Fit | .87 | *4.3* | |
| Support for Change | .94 | *4.13* | *3.91* |
| Stages of Concern | .79<br>.75 | *task 3.7*<br>*self 3.9* | |
| Extent of Use | .90 | | *2.59* |
| Innovation Configuration | | | *[see table below]* |
| Conditions Affecting Use | 3 technical levels,<br>3 degrees of change | *4.6,4.1,2.5*<br>*3.5,4.5,4.7* | *4.2,3.8,3.0*<br>*3.8,4.3,4.4* |
| Organizational Change Climate | .65 | | *4.03* |

Hypothesized relationships among variables were that managers who believed that serving as an instructor was an appropriate role were more likely to support the rationale behind the change [supported with a correlation of .84, significant at the .0001 level]. Participants who experienced an ideal or acceptable configuration of the innovation were more likely to support the rationale for the change and to report higher levels of use of the concepts and principles of robustness.

Results from the innovation configuration portion of the data analysis indicate that, as is often the case, the innovation was frequently adapted to suit local circumstances. Respondents indicated that only 48.7% of our sample experienced the innovation in its ideal configuration. Another 17.9% experienced an acceptable variation. An astonishing 45.1% experienced an unacceptable configuration. For example, 7.8% stated that their manager did not attend at all. It became clear that one of our most important variables had been to determine what after all had been implemented so that we could be sure that we were measuring the same phenomena and also that we were giving a fair test of the intended innovation. We wondered whether or not the manner of implementation affected individuals' support for the innovation and/or their use of it. Table 2 compares participants' description of the innovation configuration implemented relative to their support for the innovation and use of the intended change.

**Table 2. Effect of the Innovation Configuration on Support for the Innovation and the Extent of Use**

| Innovation Configuration [IC] | % of each [IC] | Support for Change [CS mean] | Receptivity to Organizational Change | Extent of Use [EU mean] |
|---|---|---|---|---|
| Ideal | 48.7 | 3.96 | 4.09 | 2.61 |
| Acceptable | 17.9 | 3.95 | 3.93 | 2.71 |
| Unacceptable | 33.3 | 3.83 | 3.99 | 2.54 |

Clearly, use was impacted by what was done. Equally interesting is that participants who did not receive the correct version of the innovation were less supportive of the concept--in this case in the abstract. Important for FDI's purposes, all respondents were supportive of the change. All means were in the direction of agreement with the innovation. Manager/Instructors were significantly more in favor of this innovation, though both groups supported it [Means of 4.03 for manager/instructors and 3.82 for participants; this difference is significant at the .04 level]. Managers and instructors also agreed that the more technical the level of the content, the less appropriate this approach. Also, they agreed that the broader in scope the change effort, the more appropriate this approach.

Extent of use of the change, the outcome variable in this study, was particularly interesting. We predicted that responses would be quite low since participants had only been

introduced to the concepts and principles of robustness and had not had more advanced courses describing how to use the concepts or technical application. Not surprisingly, the overall scale mean was 2.59 on a 6 point scale. What is surprising is that the two highest means referred to self-directed behaviors [planning on my own about how to use the concepts, mean of 3.36; and using the concepts in my engineering and manufacturing practices, mean of 3.16]! When we developed the extent of use measure, we scaled the items toward preparing for use through to actual use to account for this early stage of the change process. Yet, one of the highest means was the one we thought would be lowest [actual use].

## Implications for Human Resource Development

Program innovation is often risky business. Those in favor of the new ideas are often vague in their understanding of all that is entailed and those opposed are fiercely articulate about how the new approach encroaches on sacred turf. Innovations in human systems are even more problematic. People are often unpredictable, complex, and highly differentiated in their responses to new approaches. It is reasonable then to assume that an organizational innovation will engender strong responses; that these responses will be divergent; and that these differences will be important. For example, do people embrace the manager-as-instructor approach in this instance because it fits their sense of their emerging role at Ford or because they like to teach? Do they disagree with the approach because they think that this is not an appropriate use of a manager's time or because they are already overwhelmed by their responsibilities and this is an add-on? So, it is important to ask under what conditions managers' favor the innovation. Finally, change is an evolutionary, developmental experience. Responses are often more negative during the early phases of implementation because the change breaks routines and familiar ways of working. Measures which enable researchers and program designers to differentiate between typical early innovation responses and more deep-rooted concerns such as those used in this study are needed.

Watkins (1989) has defined human resource development as "the field of study and practice responsible for fostering a long term, work-related learning capacity at the individual, group and organizational levels. As such, it includes, but is not limited to training, career development, and organizational development" (p. 427). This definition, which reflects the vision of the learning organization, seeks to open the traditional paradigm of practice of the field of HRD beyond the traditional behavioristic view of practice to incorporate organizational learning. Watkins and Marsick (1992, and Marsick and Watkins 1994) assert that their vision of the field will expand HRD's role from changing the threshold of skills in the organization to becoming partners in the transformation of the organization. Human resource developers will not abandon their roles as trainers in ensuring that the workforce has the requisite work skills; they will however, "extend their impact in almost exponential fashion by working with all employees to make self-managed learning more effective and by creating ways for people to share what they learn" (Watkins and Marsick, 1993, p. 21). Additionally, they can also work closely with managers to build a culture which supports learning within the organization. In turn, managers will be challenged to assume new roles such as trainers, coaches and mentors. This research demonstrates that the road will not be easy.

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